

# 1. PROJECT SCOPE

*This chapter introduces the proposed Federal action and provides background and general information regarding the project's history and location. Chapter 1 also reviews in detail the scope of this environmental review and the nature of the decision to be made by the Tonto National Forest (TNF), USDA Forest Service (Forest Service). At the end of this chapter we briefly review the public participation efforts and identify the key issues carried forward for analysis in this Environmental Assessment (EA).*

## 1.1. Organization of the Environmental Assessment

In response to Resolution Copper Mining's (RCM) submittal of a plan of operations for prefeasibility activities, the Forest Service prepared this EA in compliance with the National Environmental Policy Act (NEPA). This EA discloses the direct, indirect and cumulative environmental impacts that would result from the proposed action and alternatives. The EA is presented in four chapters and contains an appendix.

- Chapter 1. Project Scope: Includes the history of the proposed project, the purpose and need for the project, and a summary of the results of public scoping and content analysis.
- Chapter 2. Comparison of Alternatives: Provides a detailed description of the proposed action and alternatives to the proposed action, including the no action alternative. This section concludes with mitigation and monitoring measures and a summary of the effects associated with each alternative.
- Chapter 3. Affected Environment and Environmental Consequences: Describes the affected environment and the environmental consequences of the no action, proposed action and other alternatives developed as part of our analysis of each of the key issues.
- Chapter 4. Consultation and Coordination: Provides a list of preparers and agencies consulted during the development of the EA.
- Appendix A: Responses to Public Scoping Comments: Provides specific responses to public scoping comments received during the public comment period and provides a response for each comment/concern identified in each letter, email, fax, or phone call received.

## 1.2. Project Background and History

Kennecott Exploration Company, RCM's predecessor in interest, first filed a plan of operations to pursue various exploration and pre-feasibility studies on the Globe Ranger District of the Tonto National Forests in February 2001. As the geologists, scientists and engineers involved in the pre-feasibility studies identified new targets for drilling and additional studies, the plan of operations was amended. Collectively this previous plan of operations, as amended, is referred to in this EA as the Previously Authorized Activities.

The Resolution Pre-feasibility Activities Plan of Operations (Pre-feasibility Plan of Operations; third submittal) with supplemental engineering and design information was submitted to the Forest Service in February 2008. In a letter dated June 3, 2008, the Forest Service concluded that RCM's Pre-feasibility Plan of Operations provided sufficient information to allow the Forest Service to initiate NEPA review.

***Terms Used in this  
Environmental Assessment  
Regarding the Oak Flat Area***

- Oak Flat: the area of rolling hills and basins that lies between Queen Creek Canyon and Apache Leap on the west and Devils Canyon on the east.
- Oak Flat Picnic and Campground Withdrawal Area (Oak Flat Withdrawal Area): the approximately 760 acres of land within Oak Flat that was withdrawn from all forms of appropriation in 1955 by Public Land Order (PLO) 1229 as modified in 1971 by PLO 5132. This area contains additional dispersed camping sites and recreational opportunities.
- Oak Flat Campground: the recreational area managed by Tonto National Forest that is comprised of 16 developed campsites and adjacent area that totals approximately 50 acres within the Oak Flat Withdrawal Area.

The Pre-feasibility Plan of Operations activities include:

- 1) Constructing five exploration drill sites that would impact approximately 1.14 acres and directional drilling on those sites;
- 2) Constructing eight drill sites to accommodate a total of three deep and six shallow groundwater testing and monitoring wells that would impact approximately 1.78 acres;
- 3) Constructing nine drill sites that would impact approximately 1.8 acres to accommodate a total of nine geotechnical characterization boreholes;
- 4) Continuing exploratory and monitoring activities at previously authorized drill sites that have impacted approximately 3.02 acres;
- 5) Completing necessary roadway improvements on approximately 16.97 miles of existing roads that would impact approximately 33.39 acres;
- 6) Construction of 0.33 mile of new roads that would impact 0.55 acre; and
- 7) Road maintenance for access to previously authorized drill sites and the new drill sites.

The proposed construction activities would occur on 38.66 acres and the Previously Authorized Activities have impacted 3.02 acres. Total impacts would be 41.68 acres of public land administered by the Forest Service (National Forest System Lands). Collectively, these activities described in the Pre-feasibility Plan of Operations are referred to in this EA as the Pre-feasibility Activities.

The Pre-feasibility Activities would be conducted in the western portion of the Pinal Mountains, east and south of the Town of Superior in Pinal and Gila counties. The Pre-feasibility Activities area includes the location of the proposed drill sites, previously authorized drill sites, existing roads that provide access to existing or proposed drill sites, and proposed new roads (Pre-feasibility Activity Area [PAA], Figure 1-1). The majority of the PAA would be located east of the escarpment known as Apache Leap to the steeper terrain between Devils and Rawhide Canyons. The northern and easternmost limit of the PAA is located near the town of Top of the World. An isolated western section of the PAA is located adjacent to the town of Superior where Cross Canyon intersects State Route 177 (S.R. 177). The southernmost portion of the PAA is located approximately 4 miles south of Superior. Pre-feasibility Activities would occur in these non-contiguous areas of National Forest System Lands in the following Townships, Ranges and Sections of the Gila and Salt River Baseline and Meridian:

#### Stages of a Mine Project

The mining process starts with the discovery of an ore body. To determine if the ore body can be technically and economically mined requires the implementation of a series of distinct stages of planning and development. The first step in this process is **exploration**. During exploration an ore body is determined to exist and preliminary estimates of the extent, location, and value of the ore body are made. This information is used by the mining company to initiate **pre-feasibility studies**. During pre-feasibility studies, the mining company determines the preliminary economics of the ore body, identifies potential risks, and establishes where further work and studies are required. This information is used to determine if additional financial investments are warranted. Once pre-feasibility investigations are completed, **feasibility studies** are initiated. Feasibility studies identify a conceptual project and develop costs for it. A feasibility study determines with a greater degree of certainty whether the project is viable and identifies with more precision than was available during the pre-feasibility study phase, the technical, and financial risks associated with project development. At this point the mining company makes a final determination whether or not to proceed with mine development. The detailed studies completed during this stage of mine planning include determination of the economically recoverable portion of the ore deposit, detailed metallurgical studies to determine ore recoverability, engineering design, determination of process and infrastructure costs and finance and equity requirements. If the feasibility study determines that the ore body is worth recovering, mine development can begin once all appropriate environmental permits are obtained. Various types of environmental permits may be needed at any project stage, for example NEPA compliance to authorize pre-feasibility investigations of Federal land. However, **environmental permitting** for construction of a new mine should begin once sufficient information is gathered during planning to define the mine plan with some certainty. This would typically occur near the end of the pre-feasibility study phase of a mine project and extend well into the feasibility phase of mine planning.

- Township 1 South, Range 13 East in portions of Sections 11, 13, 21 through 24, 26 through 29; and 32 through 35;
- Township 1 South, Range 14 East in portions of Sections 5, 7, and 8;
- Township 2 South, Range 12 East in portions of Sections 1, 2, 3, and 25; and
- Township 2 South, Range 13 East in portions of Sections 6, 7, 19, 20, and 30.

## **1.3. Purpose and Need for Action**

The purpose of the Pre-feasibility Plan of Operations is to gather and evaluate geologic, geotechnical, and hydrologic data to support pre-feasibility studies being conducted by RCM for their planned development of a deep copper ore deposit. RCM is entitled to conduct operations that are reasonably incident to exploration and development of mineral deposits on its unpatented mining claims pursuant to U.S. Mining Laws. Under regulations of the U.S. Secretary of Agriculture, RCM must conduct mining operations in accordance with the requirements found at 36 Code of Federal Regulations (CFR) Part 228A, and in accordance with a plan of operations that has been approved by the Forest Service. The need for the proposed Federal action is a requirement that the Forest Service respond to a proposed plan of operations to conduct mining operations on National Forest System Lands pursuant to U.S. Mining Laws.

Under 36 CFR Part 228.5, the Forest Service must determine whether to approve the Pre-feasibility Plan of Operations submitted by RCM as it is proposed, or to require changes or additions deemed necessary to meet the requirements of the regulations for environmental protection. The purpose of the proposed action and the evaluation of alternatives to the proposed action are to determine if changes or additions to the Pre-feasibility Plan of Operations are required to meet the requirements of the regulations for environmental protection set forth in 36 CFR Part 228.8.

## **1.4. Scope of the Federal Action**

The Council of Environmental Quality's (CEQ's) NEPA regulations (40 CFR Part 1500) were followed in developing the scope of review. These regulations provide specific guidance for the scope of a NEPA review which is defined as the range of actions, alternatives, and impacts to be considered in an environmental analysis (CEQ Guidance at 1508.25). In determining the scope, three types of alternatives, three types of impacts, and three types of actions, were considered. As described more below, the scope of analysis was fully considered and defined in response to the application by RCM and the decision to be made by the Forest Service.

Three types of alternatives were considered in this EA: the no action alternative, the proposed action, and alternatives to the proposed action. NEPA requires consideration of a no action alternative and it is considered in this EA in accordance with those requirements and Forest Service policy. Under the no action alternative, no Pre-feasibility Activities would be authorized on National Forest System Lands. RCM would initiate reclamation and closure requirements for existing drill sites and user-created roads in accordance with the requirements of their previously authorized plan of operations. However, the statutory right of RCM to explore and develop mineral resources on Federally administered lands is recognized in the General Mining Law of 1872 and is consistent with the Tonto National Forest Land and Resource Management Plan (Forest Plan) of 1985. Section 1.5 provides additional discussion regarding

the framework of the decision to be made by the Forest Service. The evaluation of the no action alternative provides a baseline from which the other alternatives can be compared.

This EA considers the proposed action, identifies the range of alternatives considered but eliminated from detailed analysis in this EA, and evaluates alternatives to the proposed action that directly respond to public comments provided during scoping. This EA identifies mitigation and monitoring measures that were developed to minimize potential adverse impacts of the Pre-feasibility Activities. This EA also considers three types of impacts: direct, indirect, and cumulative, in the evaluation of issues identified during public and agency scoping for each of the alternatives considered in detail.

Three types of actions: connected, cumulative, and similar actions (40 CFR Part 1508.25[a]), were also considered in the development of the scope of analysis. Connected actions are defined by CEQ as closely related actions that “(i) Automatically trigger other actions which may require environmental impact statements, (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously, (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.” CEQ also requires that cumulative actions, when viewed with other proposed actions<sup>1</sup>, should be discussed in the same environmental analysis if they would have cumulatively significant impacts. Similar actions are those reasonably foreseeable or proposed agency actions which have similarities, such as timing or geography, which provide a basis for evaluating their environmental consequences together in the same environmental analysis.

No agency actions were identified that fit the definition of similar actions or cumulative actions in developing the scope of analysis for this EA. In regard to the question of connected actions, other activities related to the development of the mine that are ongoing, proposed, or being considered by RCM to determine if they meet the CEQ definition of a connected action have been evaluated. The activities considered, all of which are associated with RCM’s ultimate goal of developing a new underground copper mine, are:

- 1) RCM’s pursuit of a legislative land exchange to acquire Oak Flat Picnic and Campground Withdrawal area (Oak Flat Withdrawal Area) and National Forest System Lands.
- 2) RCM’s dewatering of the No. 9 Shaft and RCM’s development of new shaft on private lands at the Superior East Plant Site for mine planning studies.
- 3) Issuance of a special use permit (MES749) by the Forest Service to RCM to place a water pipeline within the Magma Arizona Railroad Company (MARRCO) right-of-way to transport water collected from the No. 9 Shaft. The water is currently treated at an existing water treatment facility on RCM private property and transported to an irrigation canal operated by the New Magma Irrigation and Drainage District (NMIDD) near Florence, Arizona.

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<sup>1</sup> Proposed actions in the context of cumulative actions are considered proposed Federal actions or proposed activities over which an agency has discretionary authority and are subject to NEPA review.

- 4) Construction of exploration and groundwater testing and monitoring well drill sites on private lands and land owned and administered by the Arizona State Land Department (State lands) and improvements to Forest Service roads for access.
- 5) Construction of exploration and groundwater testing and monitoring well drill sites on National Forest System Lands and improvements to roads on State or private lands.
- 6) Development of RCM's deep copper ore body.

Each of these activities is reviewed in the following paragraphs in the context of the CEQ regulation regarding connected actions.

**(1) Legislative Land Exchange.** RCM has been pursuing a legislative land exchange to acquire National Forest System Lands adjacent to their existing private holdings. In exchange they have offered private lands located throughout Arizona that RCM has identified as having important environmental values. The Southeast Arizona Land Exchange and Conservation Act of 2009 (S.409) (the Legislative Land Exchange) is not a Forest Service action subject to review and decision by the Forest Service and at this time its passage is speculative. Analysis of this action as a connected action to the Pre-feasibility Activities follows:

*(i) Do the Legislative Land Exchange or Pre-feasibility Activities automatically trigger the implementation of the other?* The Pre-feasibility Activities do not automatically trigger the Legislative Land Exchange. The results of the investigations planned on National Forest System Lands have no bearing on the deliberations and considerations in Congress. Similarly, the Legislative Land Exchange does not cause or prompt the initiation of the pre-feasibility studies. RCM continues to make capital investments in various pre-feasibility studies regardless of the limited activity by Congress on the Legislative Land Exchange over the past several years.

*(ii) Do the Legislative Land Exchange and the Pre-feasibility Activities have to proceed in a specific order or simultaneously with one another?* The Pre-feasibility Activities can proceed with or without Congressional action on the Legislative Land Exchange, and similarly, the Legislative Land Exchange does not require RCM to proceed with the Pre-feasibility Activities. Completion of the Pre-feasibility Activities will provide information for future mine planning activities and may strengthen RCM's resolve to secure title to the selected Federal lands. However, the information obtained during these studies is not required for Congress to proceed with its approval or denial of the Legislative Land Exchange.

*(iii) Are the Pre-feasibility Activities dependent on the Legislative Land Exchange?* The Pre-feasibility Activities do not depend on the Legislative Land Exchange to justify their implementation. Similarly, the investment in these studies and the data collected should not justify Congress taking any particular action with regard to the Legislative Land Exchange. The Pre-feasibility Activities do not preclude future consideration of alternative land exchange configurations by Congress should they not authorize the current proposal or even the consideration of an administrative land exchange by the Forest Service if

proposed by RCM at some future time. The Legislative Land Exchange and the Pre-feasibility Activities do not create a but for situation where implementation of one action would not occur but for the other.

The Legislative Land Exchange before Congress is not considered a connected action in the context of this environmental assessment of the Pre-feasibility Activities.

**(2) No. 9 Shaft Dewatering and Development of a New Shaft.** The No. 9 Shaft was constructed on private lands in the early to mid-1970s as part of ongoing mining operations by the Magma Copper Company. When mining operations and dewatering activities ceased in the early 1990s, the underground workings began to fill with water. RCM has commenced dewatering operations at the No. 9 Shaft and construction of a new shaft nearby. The new shaft and the renovation of the No. 9 Shaft are being completed to conduct deep underground testing and exploration activities of the targeted copper ore body. Analysis of this action as a connected action to the Pre-feasibility Activities follows:

*(i) Do construction of the new shaft and the dewatering of the No. 9 Shaft automatically trigger the Pre-feasibility Activities or do the Pre-feasibility Activities automatically trigger new shaft construction and dewatering of the No. 9 Shaft?* Construction of the new shaft and completion of the dewatering of the No. 9 Shaft are not caused by, nor is their initiation prompted by, the Pre-feasibility Activities. Similarly, the implementation of the Pre-feasibility Activities is not prompted by development of a new deep shaft and implementation of No. 9 Shaft dewatering. Even if the Forest Service were able to select the no action alternative outlined in this EA, it would have no bearing on the outcome, approach, or scope of shaft dewatering and development activities on RCM properties.

*(ii) Do the new shaft construction/No. 9 Shaft dewatering and the Pre-feasibility Activities have to proceed in a specific order or simultaneously with one another?* These actions are physically, temporally, and logistically independent. One does not have to happen before or simultaneously with the others to enable or allow it to proceed. Should RCM stop its dewatering activities or construction of the new shaft for business or other reasons, the Pre-feasibility Activities could continue without change.

*(iii) Are the Pre-feasibility Activities dependent on the new shaft construction and No. 9 Shaft dewatering activities?* The Pre-feasibility Activities and the new shaft construction and dewatering of the No. 9 Shaft all provide information necessary to evaluate the feasibility of mine development. The data collected from each endeavor add to the body of knowledge available to RCM to make informed decisions regarding the viability of future mine development. These actions are related in that they each provide data that will inform mine planning activities, but they are not interdependent parts of a larger activity. That is, they do not rely on nor are they dependent on each other for their justification. From either perspective, the shaft dewatering and development activities on private lands and the Pre-feasibility Activities on public lands do not create a “but for” situation where implementation of one action would not occur but for implementation of the other.

The No. 9 Shaft dewatering and the construction of a new shaft nearby on private lands are not considered a connected action in the context of this environmental assessment of the Pre-feasibility Activities.

**(3) MARRCO Pipeline.** The construction and operation of the MARRCO pipeline conveys treated water from the No. 9 Shaft to NMIDD for irrigation use. In response to RCM's submitted request for a special use permit application, the Forest Service recently evaluated information provided by RCM regarding the construction of this pipeline within the MARRCO right of way and the dewatering of the No. 9 Shaft. It was determined that the dewatering of the No. 9 Shaft would not adversely affect forest resources. The Forest Service recently granted a special use permit for the construction and operation of the MARRCO pipeline (MES749). The analysis of this action as a connected action to the Pre-feasibility Activities follows:

*(i) Does construction of the MARRCO Pipeline automatically trigger the Pre-feasibility Activities or do the Pre-feasibility Activities automatically trigger construction of the MARRCO Pipeline?* The MARRCO pipeline does not prompt or cause implementation of the Pre-feasibility Activities. The MARRCO Pipeline provides an alternative means of disposing of treated water pumped from the No. 9 Shaft. It is not physically connected to the Pre-feasibility Activities. The Pre-feasibility Activities do not automatically trigger the implementation of the MARRCO Pipeline project and if the Pre-feasibility Activities were not initiated the configuration or implementation of the MARRCO Pipeline project would not be affected.

*(ii) Do the MARRCO Pipeline and the Pre-feasibility Activities have to proceed in a specific order or simultaneously with one another?* These two actions are physically, temporally, and logistically independent of each other. The Pre-feasibility Activities and the MARRCO pipeline project do not have to occur simultaneously nor does one have to be completed before the other to justify or enable the implementation of the other.

*(iii) Are the Pre-feasibility Activities dependent on construction of the MARRCO Pipeline?* The Pre-feasibility Activities are not an interdependent part of the MARRCO Pipeline project and do not depend upon the construction of the pipeline for justification. Conversely, the MARRCO Pipeline is not an interdependent part of the Pre-feasibility Activities and it is not dependent upon the Pre-feasibility Activities to justify its construction and operation. That is, these actions do not rely on nor are they dependent upon each other. The construction of the MARRCO Pipeline and the implementation of the Pre-feasibility Activities do not create a "but for" situation where implementation of one action would not occur but for implementation of the other.

The MARRCO pipeline project is not considered a connected action in the context of this EA.

**(4) Construction of Exploration and Groundwater Testing and Monitoring Well Sites on Private and State Lands Requiring Improvements of Forest Roads for Access.** A number of exploration drill



sites and groundwater testing and monitoring wells have been constructed or will be constructed on State lands located south of U.S. Highway 60 and east of S.R. 177. Examples of these sites follow.

RES-13 is an existing exploration drill site located on State land south of the Oak Flat Withdrawal Area. RES-13 is accessed through the Oak Flat Campground and other portions of the Oak Flat Withdrawal Area on Forest Road (FR 2438). Ongoing maintenance of FR 2438, user-created roads, and FR 3153 within the Oak Flat Withdrawal area are proposed as part of the Pre-Feasibility Activities.

Drill site H-H, proposed for construction on State land, will be used for construction of a shallow groundwater testing and monitoring well. Drill site H-H would be accessed from FR 2466 and the extension of FR 2466 south onto State lands. Improvements to FR 2466 are included in the Pre-feasibility Activities.

Several existing and proposed drill sites are located along the extension of FR 315 on State lands. Ongoing maintenance of FR 315 from Magma Mine Road south to provide access to some of these drill sites and construction of improvements of FR 315 on National Forest System Lands from S.R. 177 north to State lands is part of the proposed Pre-feasibility Activities. (Improvements to FR 315 from S.R. 177 would also facilitate access to drill site H-C located on National Forest System Lands.)

A drill site that is located on a small private in-holding south of the Site. Improvements were made to a user-created road from the Magma Mine Road to this parcel. Ongoing maintenance of this road would be conducted to provide access to this drill site and the private parcel of land as part of the Pre-feasibility Activities.

Analysis of drill sites on State or private lands that are accessed using roads that cross National Forest System Lands as a connected action to the Pre-feasibility Activities follows:

*(i) Does the construction of drill sites on State or private lands automatically trigger construction of road improvements on National Forest System Lands?* While the access routes outlined in the Pre-feasibility Activities to access drill sites on State and private lands may be most cost effective for mobilizing equipment and personnel at a particular site, other options exist to access these remote locations. For example, RCM has indicated in its Resolution Pre-feasibility Activities Plan of Operations that, should it not be able to secure access across private lands for its PVT-7 drill site located on National Forest System Lands, it will use helicopters to transport drilling equipment and workers to the site. The converse can also be reasonably assumed for the construction of drill sites on State or private lands: should Forest Service not authorize road improvements on National Forest System Lands that will be used to access drill sites on State or private lands, those sites could be accessed via helicopter or a combination of helicopter and four-wheel drive vehicles on the existing road system.

*(ii) Does the construction of a drill sites on private or State land and road improvements on National Forest Lands to gain access to those drill sites have to proceed in a specific order or simultaneously with one another?* The two actions as described are physically connected and it is expected that they would

occur in a specific sequence where road construction or repair would occur before construction of a drill site and subsequent drilling activities. There is a physical, temporal, and logistical relationship between the road improvements on lands owned and managed by one entity and the construction of drill sites on lands owned and managed by another. While this practical relationship exists, it does not rise to the level of dependence on a specific order for construction because of the availability of other means of gaining access to a drill site for construction and drilling operations.

*(iii) Do the drill sites on State and private lands dependent on construction of the Pre-feasibility Activities, including the road improvements on National Forest System Lands proposed to access these drill sites?* The proposed Pre-feasibility Activities, specifically the construction of road improvements and drill sites on National Forest System Lands, are not an interdependent part of the drilling programs being conducted on State and private lands and the drilling programs being conducted on State and private lands do not depend upon the drilling programs on National Forest Lands to justify their existence. Certainly, the data collected from all of the drill sites will be considered as a whole, however the data collected from the State and private lands also contributes independently to the overall understanding of the physical resources of the region. The data collected from drill sites on State and private lands still has value even if data were not available from the drill sites located on National Forest System Lands. The construction of drill sites on State and private lands are part of a larger suite of pre-feasibility studies but they are not dependent upon the other studies for their justification. The construction of drill sites on State or private lands and the implementation of the Pre-feasibility Activities on National Forest System Lands do not create a “but for” situation where implementation of one action would not occur but for implementation of the other.

The drill site development on State and private lands and the Pre-feasibility Activities, including road improvements on National Forest System Lands that will be used to access these drill sites, are not considered connected actions in the context of this EA.

**(5) Construction of Exploration and Groundwater Testing and Monitoring Well Drill Sites on National Forest System Lands that require Improvements of Roads on State or Private Lands.**

Examples of drill sites that will be constructed on National Forest System Lands but will be accessed by improved roads on State or private lands follows.

Drill site H-I is located on National Forest System Lands and will be accessed by vehicle from drill site H-H on an existing State land road. This road, which will be improved to facilitate access to H-I, becomes FR 2469 as it crosses onto National Forest System Lands going north. Improvements to H-I and FR 2469 within National Forest System Lands are part of the proposed Pre-feasibility Activities.

Drill sites QC-04 and MB-03 are located on National Forest System Lands and are accessed by FR 2440. Improvements of FR 2440 and the re-construction of QC-04 and MB-03 are part of the proposed Pre-feasibility Activities. FR-2440 crosses private lands and the segment of FR 2440 that crosses private lands will require improvement as well.

Drill site H-E would be accessed from FR 315. Improvements and maintenance of FR 315 is part of the Previously Authorized Activities included in the proposed Pre-feasibility Activities. After FR 315 enters State land, a short segment of user-created road on State lands will be improved before this existing user-created road re-enters National Forest System Lands. The continuation of improvements to this user-created road on National Forest System Lands is part of the proposed Pre-feasibility Activities.

South Access Alternatives 4a and 4b, which are action alternatives that were developed to provide an alternative access route to drill sites OF-1, OF-3, and M on National Forest System Lands and will cross a short segment of State land west of RES-13.

PVT-7, which will be accessed by helicopter unless agreement is reached with nearby private land owners. If agreement is reached, PVT-7 would be accessed either through the Pinal Ranch or the JI Ranch.

APV-8, which will be accessed from FR 898. Access to FR 898 from U.S. Highway 60 crosses private land and improvements to this road on private lands will be made to allow the drilling equipment to access FR 898 on National Forest System Lands.

Analysis of improvements and use of roads on State and private lands to access drill sites on National Forest System Lands as a connected action to the Pre-feasibility Activities follows:

*(i) Does construction of drill sites on National Forest Lands that use or will use access roads on State or privately held land automatically trigger the required road improvements on State or private lands? No.* For example, RCM has already indicated in its Pre-feasibility Plan of Operations that if it cannot secure access across private lands for its PVT-7 drill site located on National Forest System Lands, it will use helicopters or helicopters plus small four wheel drive vehicles on existing roads within National Forest System Lands to transport drilling equipment and workers to the site.

*(ii) Do the construction of a drill sites on National Forest System Lands and road improvements on State or private lands to access those drill sites have to proceed in a specific order or simultaneously with one another?* The two actions as described are physically connected and it is expected that they would occur in a specific sequence where road construction or repair would occur before construction of a drill site and subsequent drilling activities. There is a physical, temporal, and logistical relationship between the contemplated road improvements on lands owned and managed by one entity and the construction of drill sites on lands owned and managed by another. While this practical relationship exists, it does not depend on a specific order or simultaneous execution for construction because of the availability of other means of gaining access to a drill site for construction and drilling operations.

*(iii) Do the Pre-feasibility Activities proposed on National Forest System Lands depend on construction of road improvements or drill sites on State or private lands?* The proposed Pre-feasibility Activities, specifically the construction of drill sites on National Forest System Lands, are not an interdependent part of the drilling programs being conducted on State and private lands. Conversely, the drilling programs

being conducted on State and private lands do not depend upon the drilling programs on National Forest System Lands to justify their existence. Certainly, the data collected from all of the drill sites will be considered as a whole; however the data collected from the National Forest System Lands proposed in the Resolution Pre-feasibility Activities Plan of Operations contributes independently to the overall understanding of the physical resources of the region. The data collected from drill sites on National Forest System Lands still has value, even if data were not available from the drill sites located on State and private lands. The construction of drill sites on National Forest System Lands for exploration, groundwater testing and monitoring, and tunnel characterization work are part of a larger suite of pre-feasibility studies, but they are not dependent upon those other studies for their justification. The construction of drill sites as part of the proposed Pre-feasibility Activities and the construction of drill sites for pre-feasibility studies on State or private lands do not create a “but for” situation where implementation of one action would not occur but for implementation of the other.

The Pre-feasibility Activities and drill site development on State and private lands, including road improvements on State and private lands that will be used to access some Pre-feasibility Activity drill sites, are not considered connected actions in the context of this EA.

**(6) Development of the Deep Copper Ore Body.** RCM has stated publicly on numerous occasions that its ultimate intention is to pursue required permits and permissions to mine the deep copper ore body that underlies both its privately held lands and National Forest System Lands. To date, there has been no formal proposal submitted to the Forest Service for development of this ore body on National Forest System Lands or to use National Forest System Lands to support development of this ore body. There are a series of planning stages that must proceed in the logical progression prior to the initiation of mine development. Among them is the determination that mining the ore body is technically and economically feasible. The implementation of the proposed exploration and pre-feasibility studies is required to collect data necessary to support RCM’s analysis of the mine’s feasibility. Mine development is not automatically triggered by the Pre-feasibility Activities. In fact, the opposite could occur, and RCM, in this case, could determine that mine development is not technically or economically feasible. RCM has clearly made a business decision to proceed with pre-feasibility studies, including the Pre-feasibility Activities, based upon current knowledge of the deep copper ore body and the technical and logistical constraints associated with its development. While further analysis of mine development will require completion of the Pre-feasibility Activities, the implementation of the Pre-feasibility Activities does not depend upon the mine. The Pre-feasibility Activities are a calculated, risk-based business decision by RCM and it is not certain that mining the deep copper ore body will be technically or economically viable.

## **1.5. Decision Framework**

The Tonto National Forest Supervisor is the deciding officer with regard to the Pre-feasibility Plan of Operations. Based on the analysis in this EA, the Forest Supervisor would first determine if an

Environmental Impact Statement (EIS) is required. If an EIS is not required, the Forest Supervisor's final decision notice would be a finding of no significant impact (FONSI). The Forest Supervisor will also determine if approval of the Pre-feasibility Plan of Operation would be consistent with the Forest Plan, or if an amendment to the Forest Plan is required.

A FONSI is appropriate if the agency's decision is not likely to *significantly* affect the environment (40 CFR Part 1508.27). In gauging significance, the agency must consider both *context* and *intensity*. *Context* recognizes that significance varies depending on whether impacts are local, regional, global, or affect a particular subset of the population. *Intensity* refers to the severity of the impacts, and must consider: beneficial as well as adverse impacts; whether impacts are highly unknown or risky, are highly controversial, or whether the action will establish a precedent; the effect on public health and safety, and whether the action violates Federal, State, or local law protecting the environment; effects on unique geographical areas such as historic or cultural resources, areas or objects listed on the National Register of Historic Places (NRHP), parks, prime farmlands, wetlands, wild and scenic rivers, or places of highly scientific value; effects on threatened or endangered species; and whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Given the purpose and need for Federal action, the Forest Supervisor will review the proposed Pre-feasibility Activities Plan of Operations, alternatives, and environmental consequence to make the following decisions:

- 1) Approve the project as proposed; or
- 2) Notify RCM of changes or additions to the Pre-feasibility Plan of Operations necessary to minimize or eliminate adverse environmental impacts from mineral development activities on National Forest System Lands, as required by Forest Service regulations (36 CFR Part 228A); and
- 3) Determine the appropriate type and amount of financial assurance to cover costs of reclamation.

The Forest Supervisor's decision on the proposed action would be appealable. RCM may appeal the decision pursuant to 36 CFR Part 215 or 251. Other parties may appeal the decision pursuant to 36 CFR Part 215.

Following issuance of a FONSI and decision notice and resolution of any appeal, RCM must revise the Pre-feasibility Plan of Operations to conform to the decision notice. The revised Pre-feasibility Plan of Operations must be resubmitted to the Forest Service along with a reclamation bond or other acceptable form of financial assurance. The financial assurance instrument provided to the Forest Service will ensure that the National Forest System Lands involved with the Pre-feasibility Activities are reclaimed in accordance with the decision notice, the revised Pre-feasibility Plan of Operation, and Forest Service reclamation requirements (36 CFR Parts 228.8 and 228.13). Once the Forest Service determines that the revised Pre-feasibility Plan of Operations has been changed to conform to the decision notice and that the financial assurance instrument is acceptable, it will notify RCM that the Pre-feasibility Plan of Operations is approved.

## 1.6. Public Involvement

The Pre-feasibility Plan of Operations was listed in the Forest Service Schedule of Proposed Actions on June 11, 2008. A Notice of Intent (NOI) to prepare an EA and invitation to attend a public open house was published on June 11, 2008, in five area newspapers: *Scottsdale Tribune*, *East Valley Tribune*, *Arizona Silver Belt*, *Copper Basin News*, and the *Superior Sun*. A general scoping letter was sent to 135 individuals and organizations on June 9, 2008. Scoping letters were sent to 18 officials at 10 Native American tribes. The scoping information was also posted on the Forest Service website. The NOI and scoping letters provided information about RCM's Pre-feasibility Plan of Operations, described how interested members of the public could obtain more information and provide comment, and announced the open house hosted by the Forest Service. The open house was held on June 25, 2008, at the Junior/Senior High School in Superior, Arizona, to provide an opportunity for the public to learn more about the Pre-feasibility Activities and to provide comment. The public scoping period for this action closed on July 18, 2008.

Public comments received during the open house or submitted during the public scoping period by email, fax, surface mail or private mail service, are collectively referred to here as Comment Letters. Thirty-one Comment Letters were received. The Forest Service Interdisciplinary Team (ID Team) discussed and analyzed the individual comments or concerns expressed within each Comment Letter to identify the key issues that would be addressed in this EA. A response to each comment/concern identified in the Comment Letters submitted during public scoping is provided in Appendix A.

## 1.7. Issue Development

Using the comments from the public, the Tribes, and other agencies and organizations, the ID Team developed a list of issues to address in the environmental analysis. CEQ regulations specify that only significant or key issues be analyzed. Therefore, the ID Team placed each issue into one of two groups: key issues and non-significant issues. Issues were considered non-significant if they were:

- Beyond the scope of the proposed action.
- Irrelevant to the decision to be made.
- Already decided by law, regulation, or policy.
- Conjectural in nature or not supported by scientific evidence.

Key issues were then used to formulate alternatives to the proposed action, prescribe mitigation and monitoring measures, and to guide the analysis of environmental effects of the proposed action and alternatives.

Ten key issues were identified during scoping and this analysis. They include:

**Issue 1: Air Quality.** Road and drill site maintenance, construction, and drilling activities may cause an undue increase in particulate matter, regional haze, and ozone.

**Issue 2: Erosion and Sedimentation.** Pre-feasibility Activities, specifically the improvement, construction, and maintenance of roads and drill sites, drilling, and testing and monitoring activities, may increase erosion and sediment runoff from the PAA and unduly affect surface water quality.

**Issue 3: Wildlife.** Pre-feasibility Activities may cause undue impacts to wildlife within or in the vicinity of the PAA.

**Issue 4: Arizona Hedgehog Cactus.** Road widening, construction of new roads, or construction of new drill sites may impact Arizona hedgehog cactus and/or its habitat in the PAA.<sup>2</sup>

**Issue 5: Recreational Activities In and Around Oak Flat (Issue 8).** Implementation of the Pre-feasibility Activities may adversely impact the recreational user's experience within the Oak Flat Withdrawal Area and adjacent dispersed recreational areas. Adverse impacts may include restriction of access, an increase in traffic and noise, and degradation of visual resources.

**Issue 6: Safety.** The conflicts between recreational users and drilling and construction crews responsible for implementation of the Pre-feasibility Activities may increase risks of traffic accidents on National Forest System Lands, particularly in the vicinity of Oak Flat Campground.

**Issue 7: Conflicts with Oak Flat Withdrawal Area.** The use of directional drilling may allow RCM to drill under the Oak Flat Withdrawal Area in violation of the public land order that removed this area from appropriation under U.S. Mining Laws.

**Issue 8: Travel Management.** The road system utilized by RCM during Pre-feasibility Activity operations and reclamation and closure proposed in the Pre-feasibility Plan of Operations may not conform to Forest Service's Travel Management goals that may become established as part of the Forest Service's current planning efforts.

**Issue 9: Cultural Resources.** The Pre-feasibility Activities may have an undue impact on prehistoric, historic, and other cultural resources within or in the vicinity of the PAA.

**Issue 10: Native American Religious Practices.** The Pre-feasibility Activities may have an undue impact on Native Americans' free exercise of religion at sites identified as sacred within or in the vicinity of the PAA.

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<sup>2</sup> The Forest Service has determined that the proposed action may affect but is not likely to adversely affect Arizona hedgehog cactus. Informal consultation in accordance with the requirements of Section 7 of the Endangered Species Act with the United States Fish and Wildlife Service has been initiated by the Forest Service.

The affected environment and the direct, indirect, and cumulative effects of the no action, proposed action and other alternatives developed as part of our analysis of each of these key issues are summarized in Chapter 2 and described in greater detail in Chapter 3.



Figure 1-1. Proposed Pre-feasibility Activities Location Map

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